

Application No. 10/776,635
Amendment dated 1 February 2006
Reply to Office Action of 1 September 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (currently amended): A method for methylating a gene of interest in a mammalian cell comprising:

exposing said cell to an siRNA molecule which is specific for a target sequence in said gene of interest, wherein said target sequence is located in a promoter region of said gene of interest and wherein said siRNA directs methylation of said gene of interest.

Claims 2-3 (canceled).

Claim 4 (original): The method of claim 1, wherein said siRNA directs methylation of a promoter region of said gene of interest.

Claim 5 (canceled).

Claim 6 (original): The method of claim 1, wherein said siRNA contains about 19-28 base pairs.

Claim 7 (original): The method of claim 6, wherein said siRNA contains about 21 base pairs.

Claim 8 (original): The method of claim 1, wherein said mammalian cell is a human cell.

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Claim 9 (withdrawn): The method of claim 1, wherein said gene of interest is an infectious agent gene.

Claim 10 (withdrawn): The method of claim 8, wherein said infectious agent is viral.

Claim 11 (original): The method of claim 1, wherein said cell is exposed to said siRNA by introducing into said cell DNA sequences encoding a sense strand and a antisense strand of said siRNA, wherein said siRNA is expressed in the cell.

Claim 12 (original): The method of claim 11, wherein said introducing is accomplished using at least one vector.

Claim 13 (original): The method of claim 12, wherein said vector is a plasmid vector.

Claim 14 (original): The method of claim 12, wherein said vector is a viral vector.

Claim 15 (original): The method of claim 14, wherein said viral vector is a retroviral vector, a lentiviral vector, or an adenoviral vector.

Claim 16 (original): The method of claim 12, wherein said vector is an adeno-associated vector.

Claim 17 (original): The method of claim 11, wherein said introducing takes place in vivo.

Claim 18 (original): The method of claim 11, wherein said introducing takes place in vitro.

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Claim 19 (original): The method of claim 11, wherein said introducing is achieved via transformation, transduction, transfection, or infection.

Claim 20 (original): The method of claim 11, wherein said introducing is achieved via a liposome.

Claim 21 (original): The method of claim 11, wherein said DNA sequences are generated by PCR.

Claim 22 (currently amended): The method of claim 1, wherein said gene is a human RASSF1 gene.

Claim 23 (original): The method of claim 12, wherein said DNA sequences are in the same vector.

Claim 24 (original): The method of claim 12, wherein said DNA sequences are in separate vectors.

Claim 25 (original): The method of claim 1, wherein said method causes inactivation of said gene of interest.

Claim 26 (withdrawn): The method of claim 1, wherein said method causes activation of said gene of interest.

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SEQUENCE LISTING

Please insert the attached pages 1-4 of the Sequence Listing submitted herewith into the instant application. Applicants request entry of the Sequence Listing. The undersigned states that the Sequence Listing contains no new matter.